

## SYSTEM DESCRIPTION

### 1. BRIEF DESCRIPTION

- (a) CAN (Controller Area Network) is a serial data communication system for real time application. It's a multiplex communication system to be equipped for a vehicle and has a high communication speed (500 kbps) and the function to detect a malfunction.
- (b) Pairing the CANH bus line and CANL bus line, the CAN preforms communication based on differential voltage.
- (c) xb uses the CAN communication system for communication between the ECU and sensors in the ABS with EBD & BA & TRAC & VSC system.
- (d) The CAN has two resistors of 120  $\Omega$  which are necessary to communicate with the main bus line.

### 2. DEFINITION OF TERMS

- (a) Main bus line
  - (1) Main bus line is the wire harness between the two terminus circuits on the bus (communication line). This is main bus in the CAN communication system.
- (b) Sub bus line
  - (1) Sub bus line is the wire harness which diverges from the main bus line, main bus of the CAN bus, to the ECU or sensor.
- (c) Terminus circuit
  - (1) Terminus circuit is a circuit which is placed to convert communication current of the CAN communication into bus voltage and it consists of a resistor and condenser. Two terminus circuits are necessary on a bus.

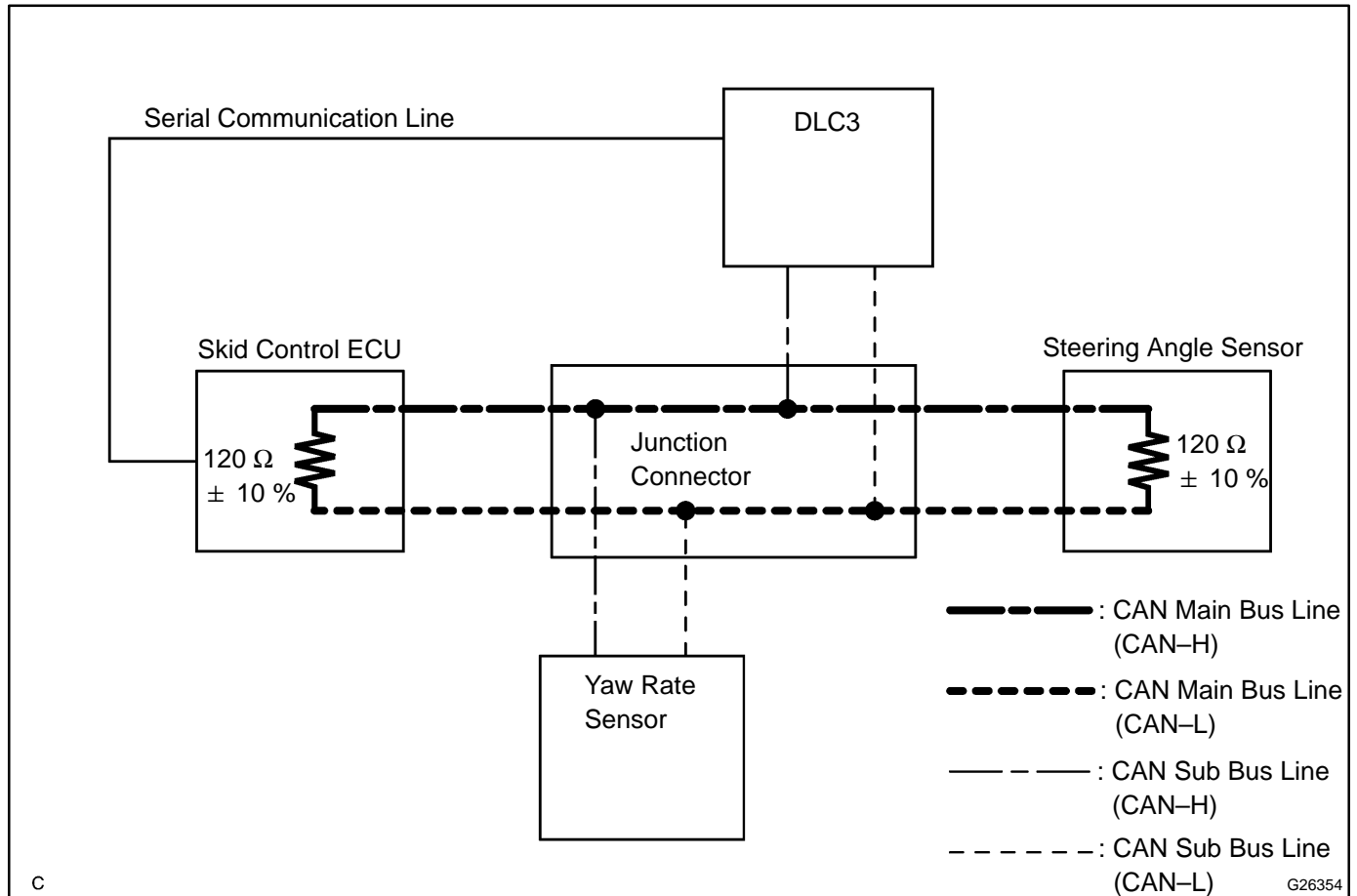
### 3. ECU OR SENSORS WHICH COMMUNICATE THROUGH CAN COMMUNICATION SYSTEM

- (a) Skid Control ECU
- (b) Yaw Rate Sensor
- (c) Steering Angle Sensor

### 4. DIAGNOSTIC CODE FOR CAN COMMUNICATION SYSTEM

- (a) DTCs for CAN system are as follows:  
U0121/94, U0123/62, U0124/95, U0126/63

## 5. CAN COMMUNICATION SYSTEM CIRCUIT DESCRIPTION



### HINT:

The skid control ECU stores DTCs and performs DTC communication by receiving information from the steering angle sensor and yaw rate sensor because these sensors cannot store DTCs or perform DTC communication.

### 6. REMARK FOR TROUBLESHOOTING

- (a) Trouble in the CAN bus (communication line) can be checked from the DLC3 (except a wire break other than in the DLC3 sub bus line).
- (b) By using the hand-held tester, DTCs for the CAN communication can be checked through the DTC ISO 9141K-Line.
- (c) CAN communication cannot detect trouble on the DLC3 sub bus line even though the DLC3 is also connected to the CAN communication.